



Weeks 2-3 Global Tropics Hazards Outlook

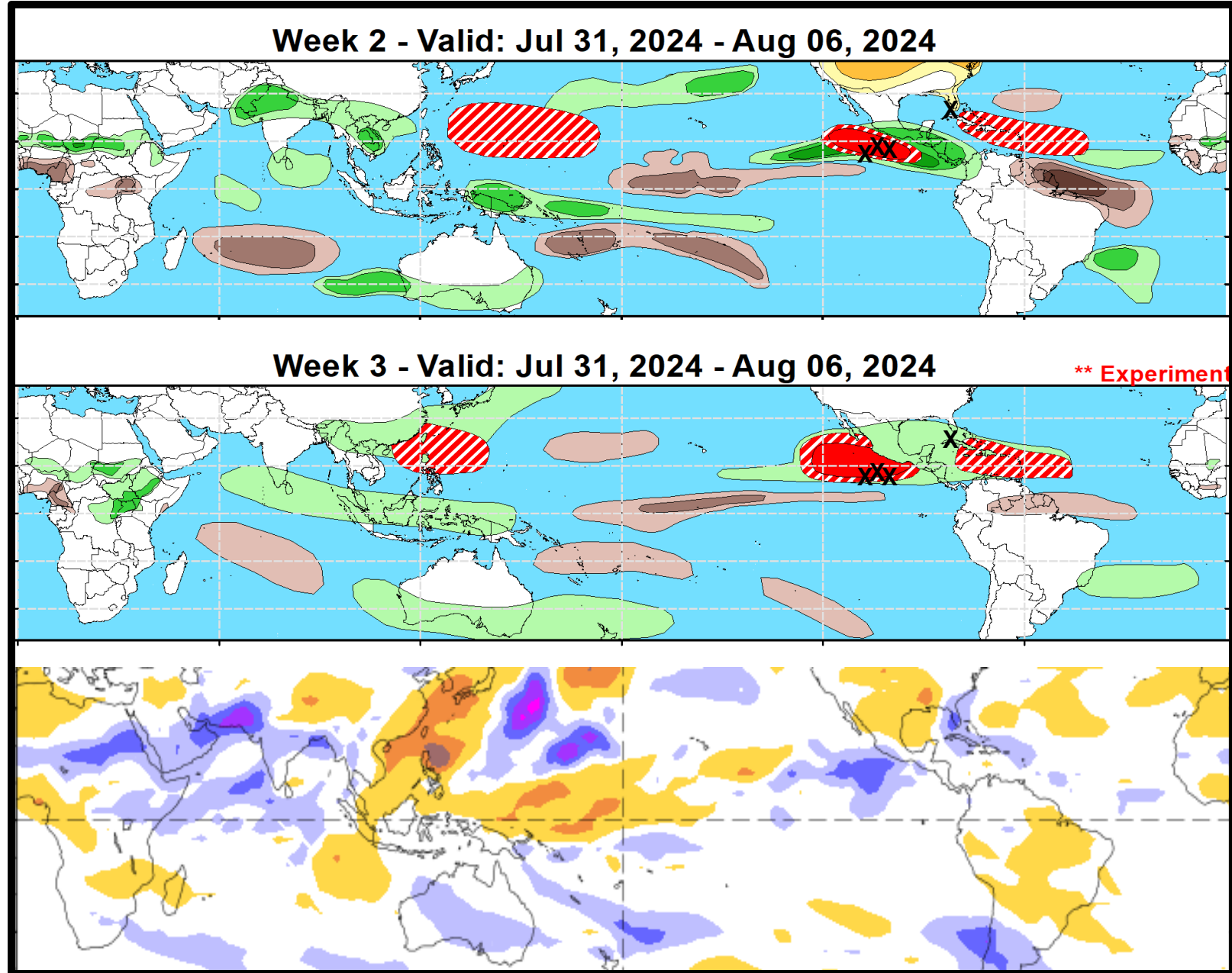
8/6/2024

Adam Allgood

NWS / NCEP / Climate Prediction Center

Outlook Review: TC development & anomalous precipitation during the past week

- The disruption of the La Niña type response over the East Pacific due to a CCKW was well forecast
- No new TCs formed over the West Pacific



Synopsis of Climate Modes:

ENSO: (July 11, 2024 Update) *next update on Thursday, Aug 8th*

- ENSO Alert System Status: [La Niña Watch](#)
- ENSO-neutral is expected to continue for the next several months, with La Niña favored to emerge during August-October (70% chance) and persist into the Northern Hemisphere winter 2024-25 (79% chance during November-January).

MJO and other subseasonal tropical variability:

- Following a period of incoherence during much of July, a more organized tropical intraseasonal signal is developing, with a strong CCKW crossing the Pacific.
- Dynamical models show this CCKW interacting with enhanced divergence and Rossby wave activity over the Indian Ocean, resulting in the development of a MJO event.
- The MJO is forecast to cross the Indian Ocean during the Weeks 2-3 period.
- An Indian Ocean MJO event, coupled with widespread above-normal SSTs across the Atlantic basin, and an enhanced and northerly displaced African monsoon, all favor a period of enhanced tropical cyclone activity across the Atlantic basin.

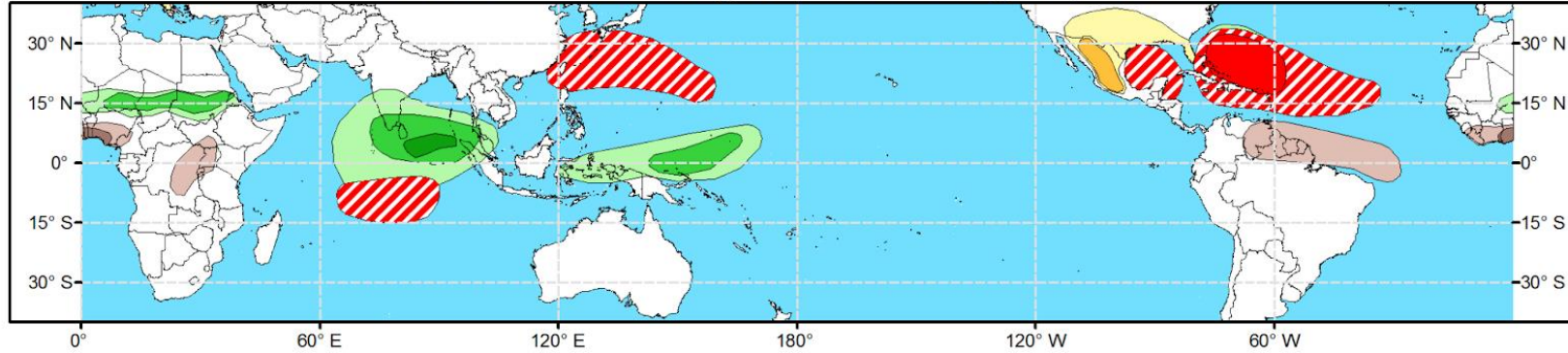
GTH Outlook:



Global Tropics Hazards Outlook Climate Prediction Center

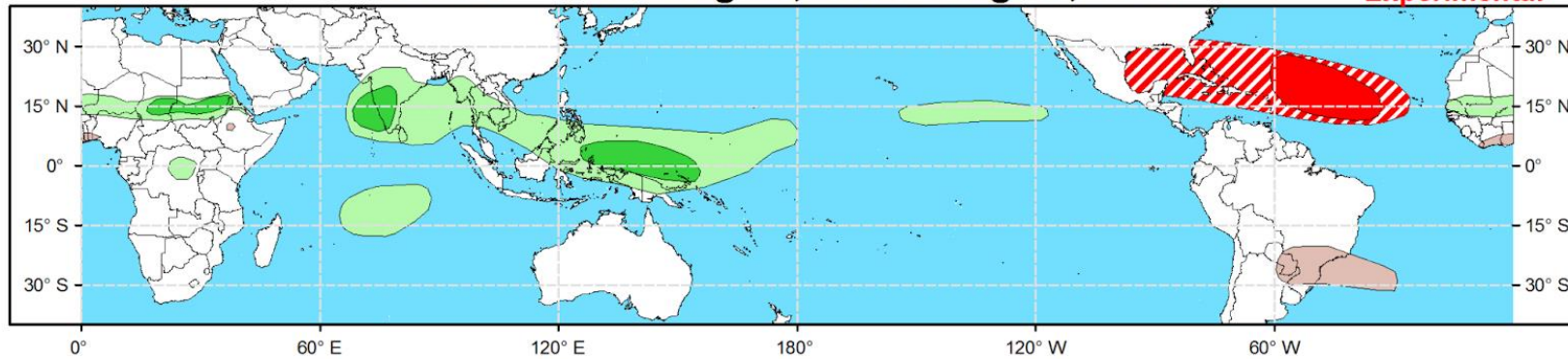


Week 2 - Valid: Aug 14, 2024 - Aug 20, 2024



Week 3 - Valid: Aug 21, 2024 - Aug 27, 2024

**** Experimental ****



**Tropical Cyclone (TC)
Formation Probability**



>20% >40% >60%

*Tropical Depression (TD)
or greater strength*

**Above-Average
Rainfall Probability**



>50% >65% >80%

*Weekly total rainfall in the
Upper third of the historical range*

**Below-Average
Rainfall Probability**



>50% >65% >80%

*Weekly total rainfall in the
Lower third of the historical range*

**Above-Average
Temperatures Probability**



>50% >65% >80%

*7-day max temperatures in the
Upper third of the historical range*

**Below-Average
Temperatures Probability**



>50% >65% >80%

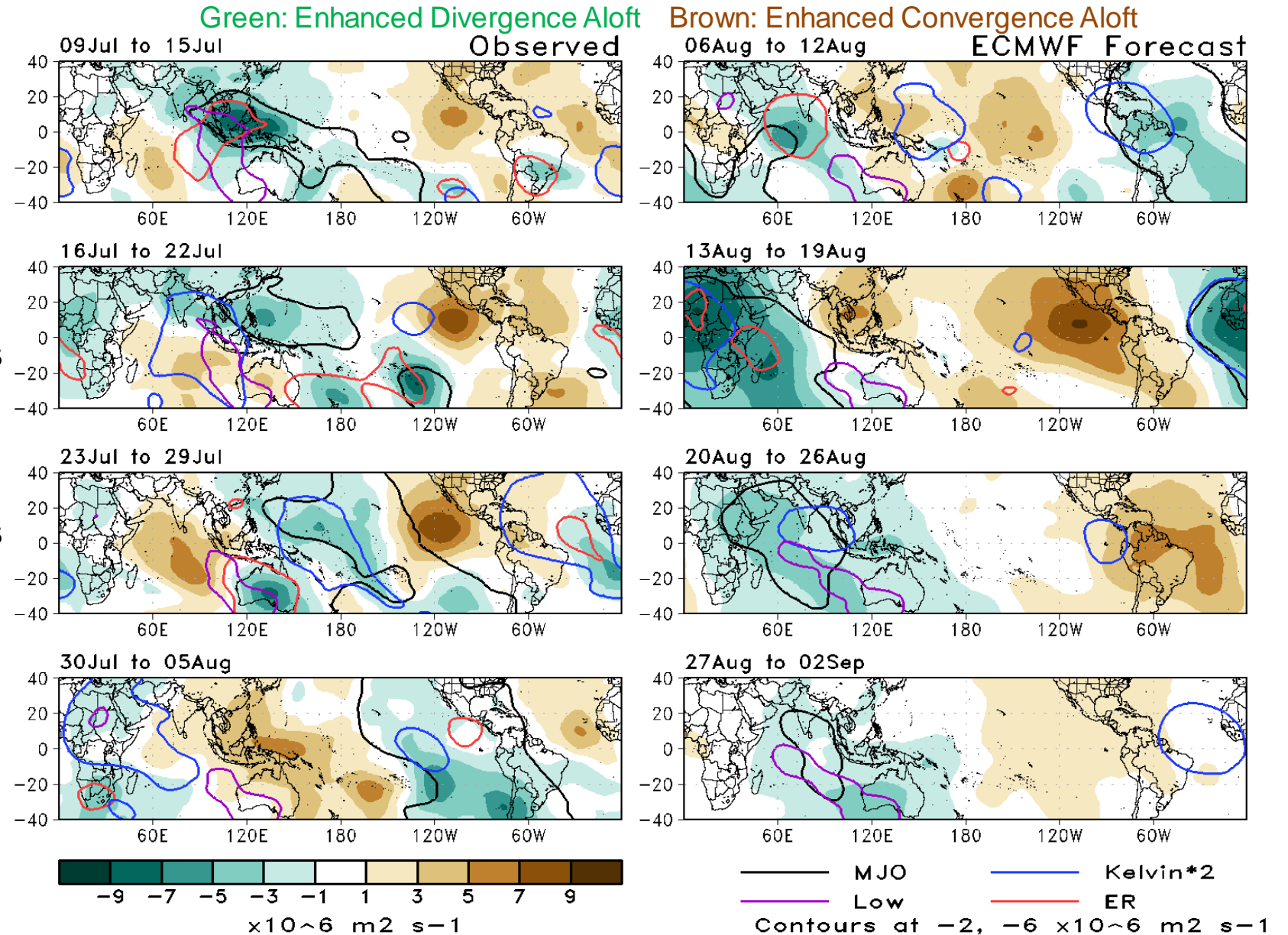
*7-day min temperatures in the
Lower third of the historical range*

**Issued: 08/06/2024
Forecaster: Allgood**

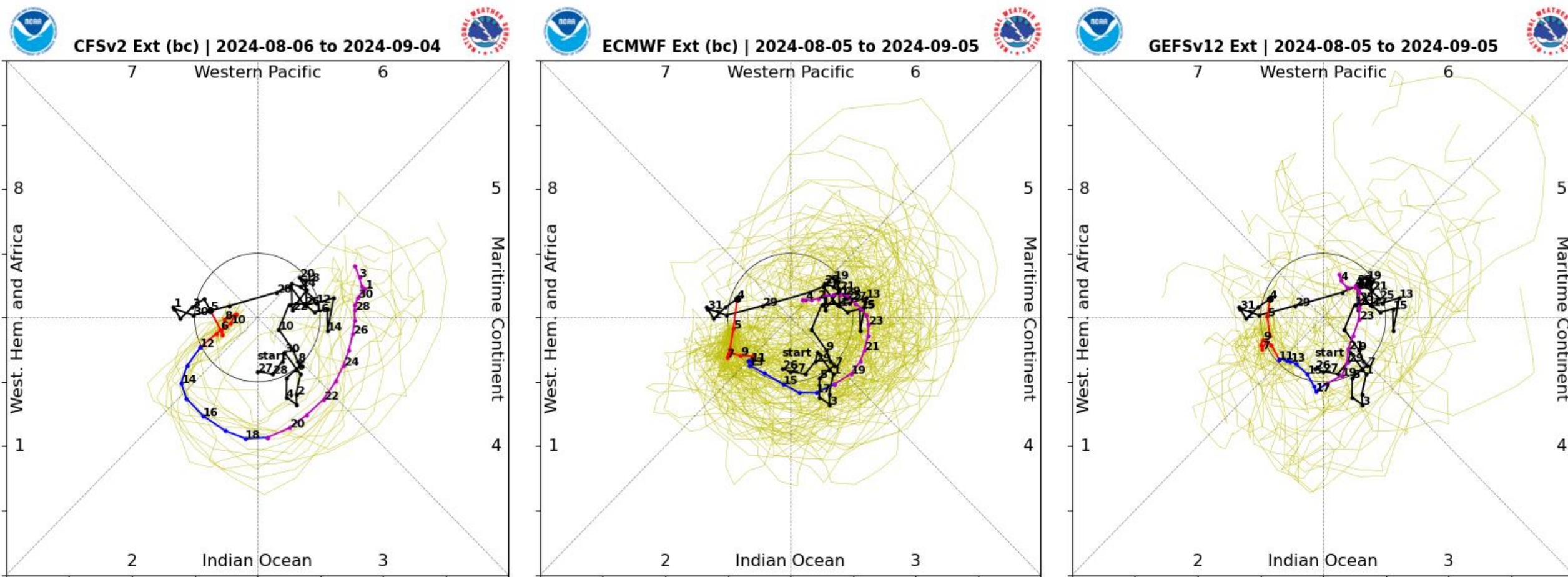
This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

200-hPa Velocity Potential Anomaly Maps:

- Despite the incoherent signal on the RMM index, there is some eastward propagation evident during July.
- A much more organized signal is favored to emerge during August.
- Very strong anomalous ascent is favored over Africa during Week-2.

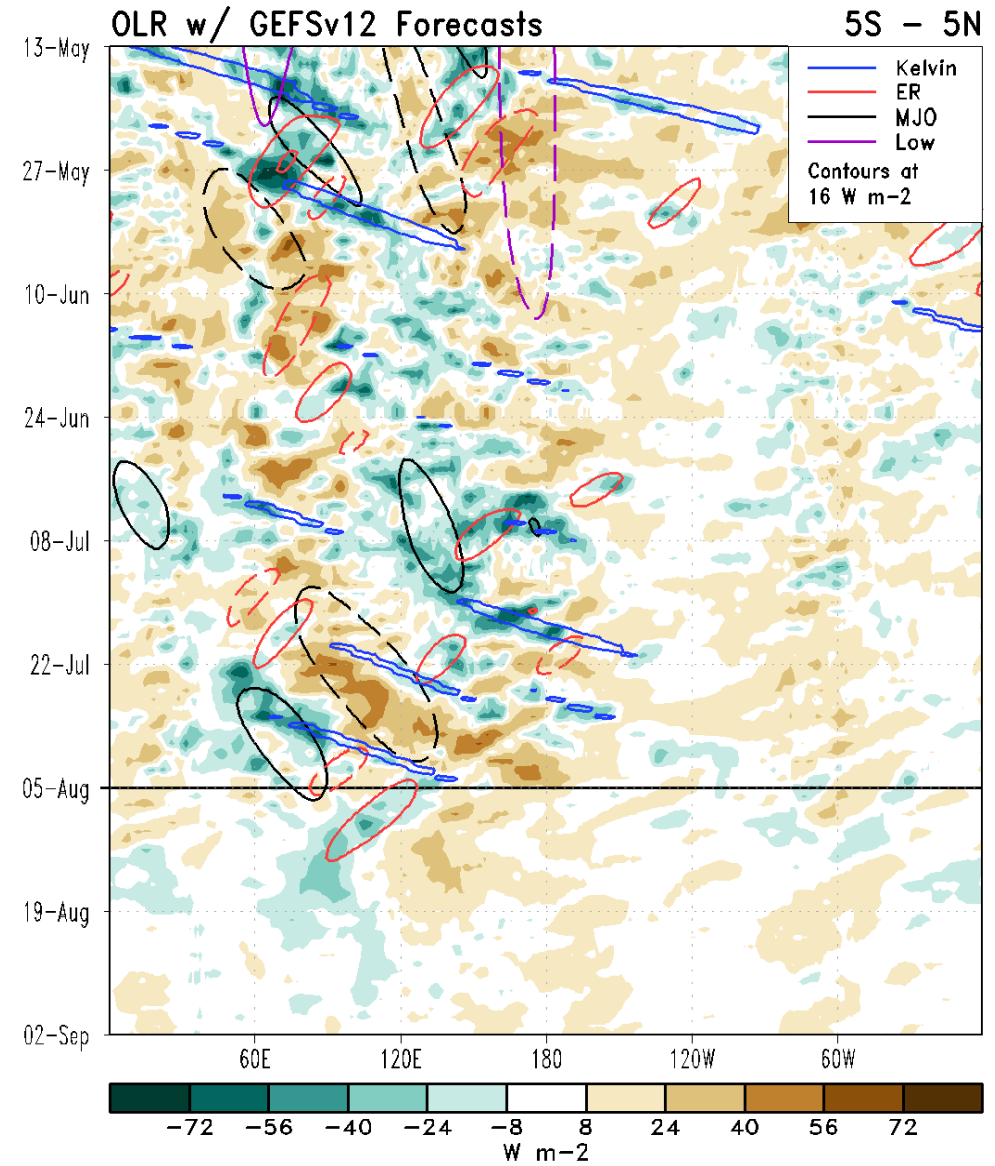
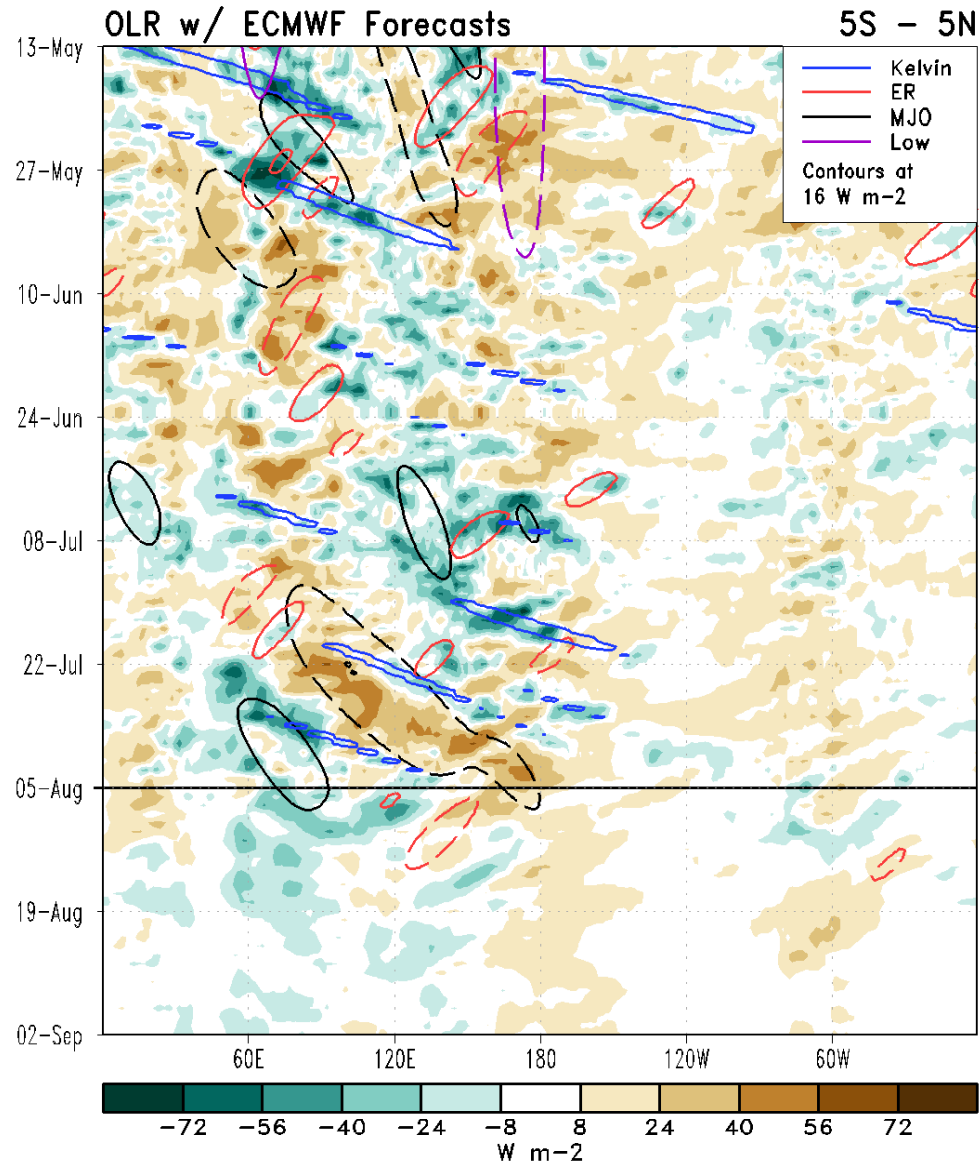


RMM Index Observations & Forecasts:



- Good model agreement from each system favoring MJO activity crossing the Indian Ocean during the period.
- The MJO should help promote a trade wind surge across the Pacific, making the recent flip short-lived.
- Atlantic TC activity tends to increase significantly when the MJO crosses phases 2-3.

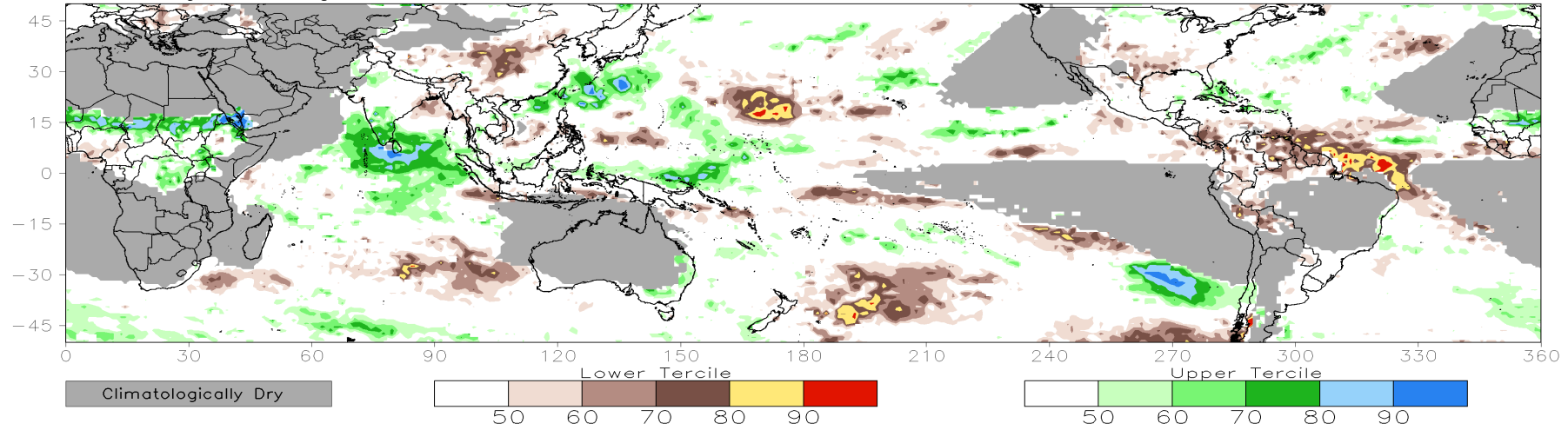
Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



Consolidated Probabilistic Precipitation: Weeks 2 & 3

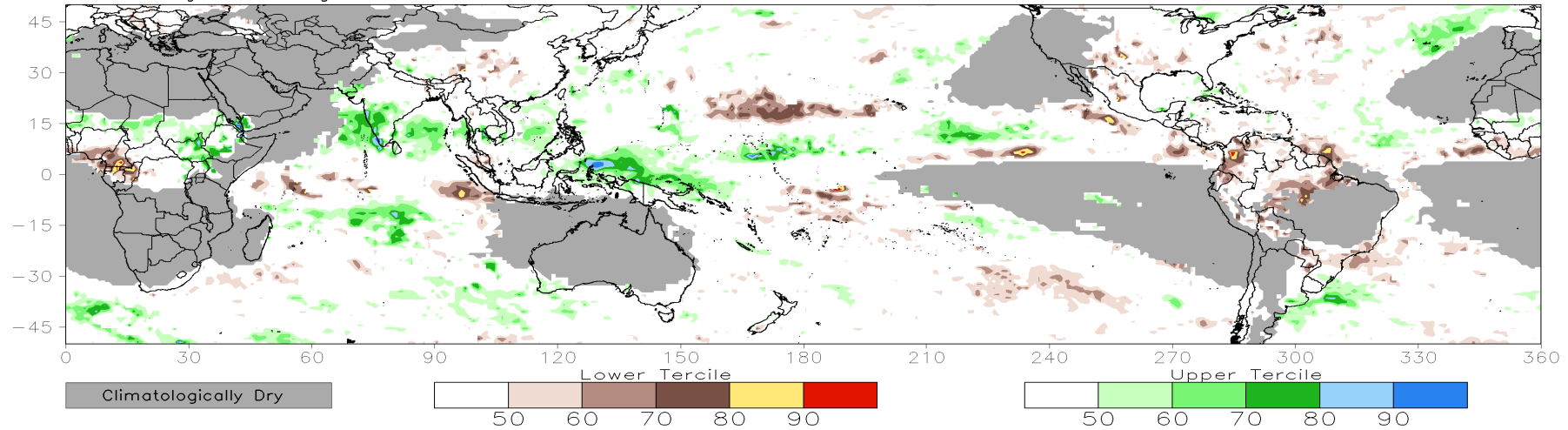
CONS 00z: Week2 Probability for Total Rainfall Below(Above) Lower(Upper) Tercile (%)

Valid: 14Aug2024–20Aug2024



CONS 00z: Week3 Probability for Total Rainfall Below(Above) Lower(Upper) Tercile (%)

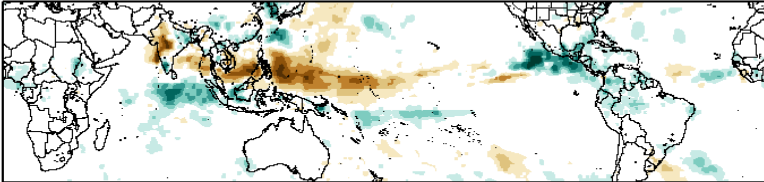
Valid: 21Aug2024–27Aug2024



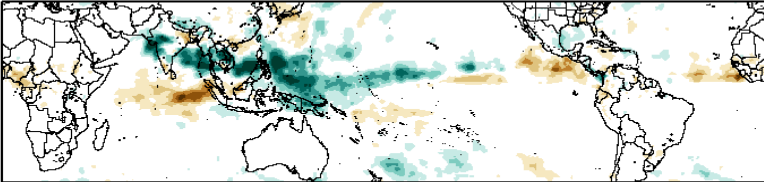
Historical Precipitation Anomalies By MJO Phase:

JAS MJO Composite: GPCP1DD (mm/day)

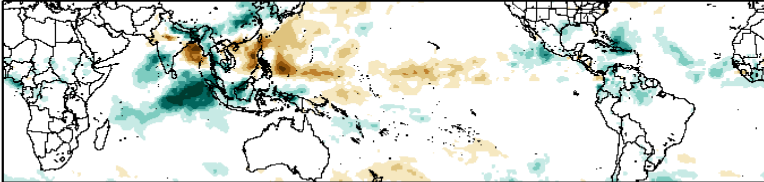
Phase 1



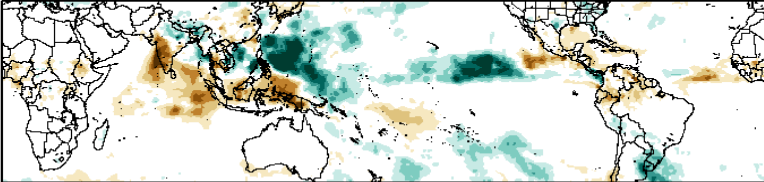
Phase 5



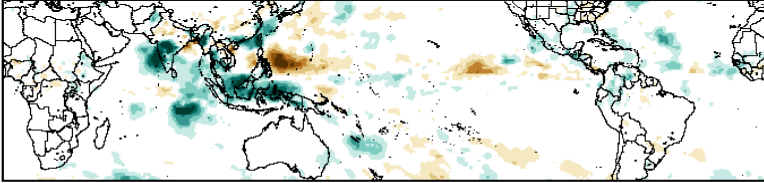
Phase 2



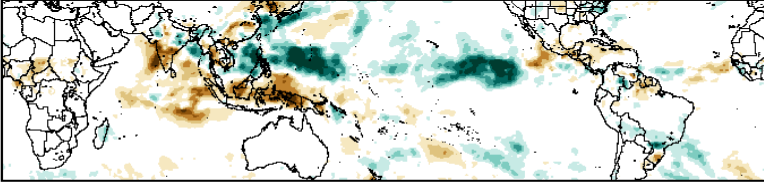
Phase 6



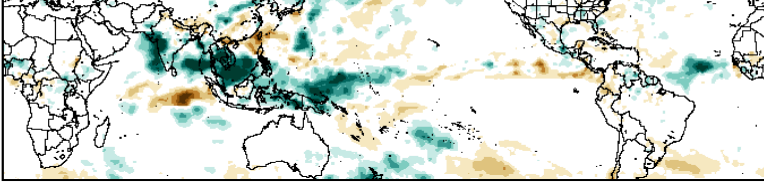
Phase 3



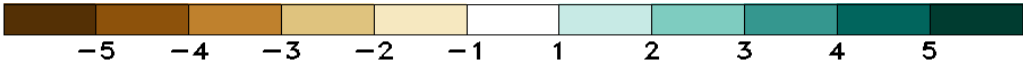
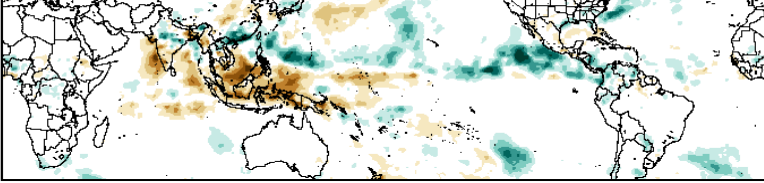
Phase 7



Phase 4

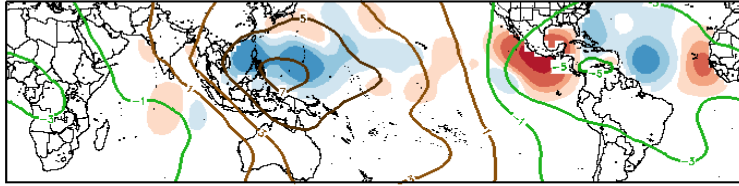


Phase 8

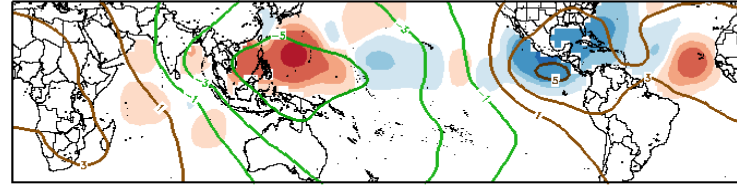


Historical TC Origin Anomalies By MJO Phase & Weeks 2+3 Genesis Climo:

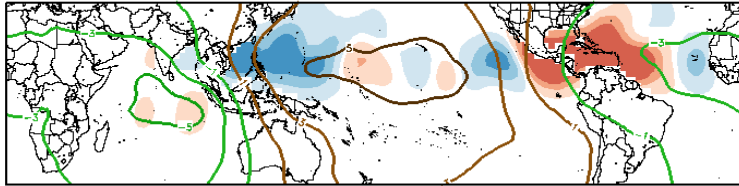
JAS MJO Composite: Mean TC Origin Density Anomaly ($\#TCs/277km^2*100$)
w/ JAS CHI200 ($\times 10^{-6} m^{-2} s^{-1}$) / Contours every $2 \times 10^{-6} m^{-2} s^{-1}$



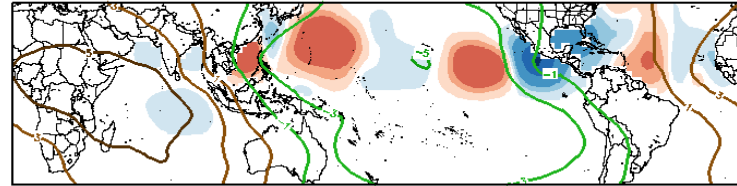
Phase 1



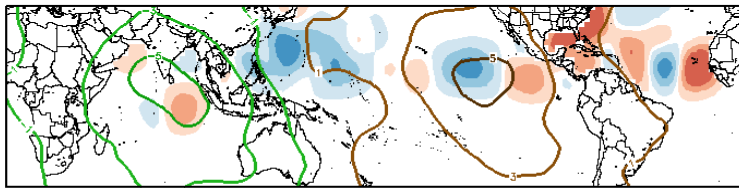
Phase 5



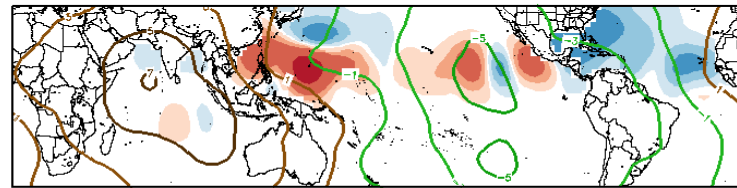
Phase 2



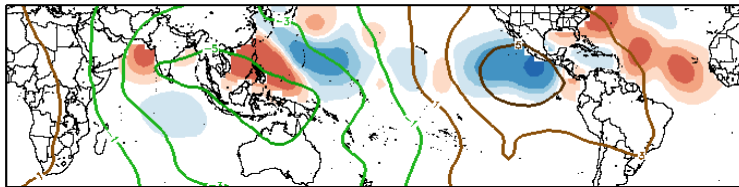
Phase 6



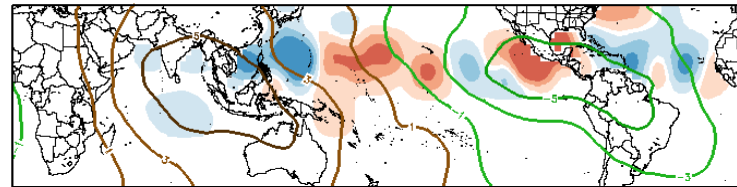
Phase 3



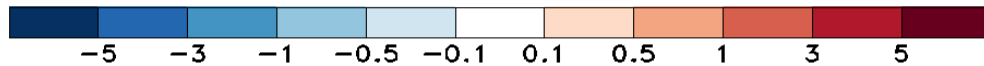
Phase 7



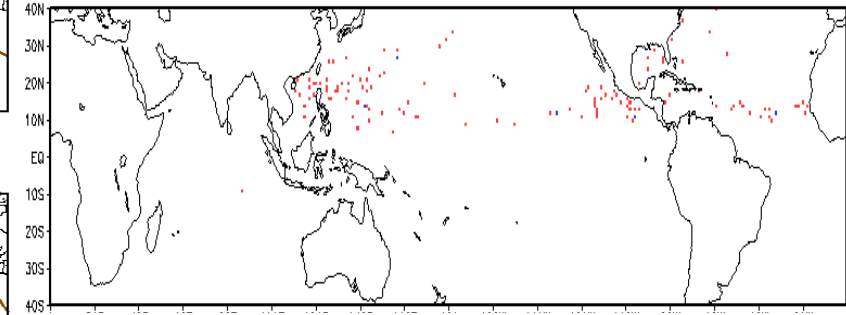
Phase 4



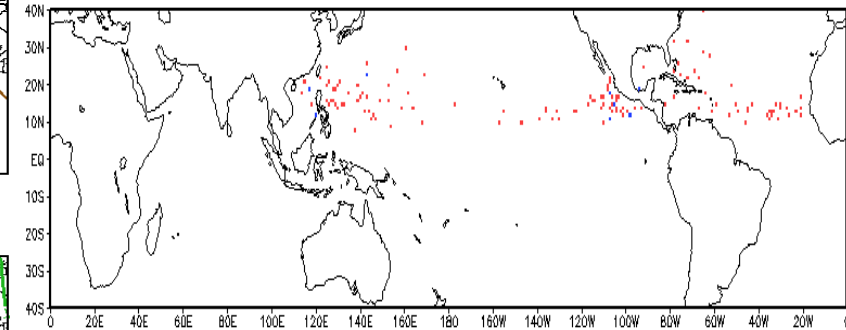
Phase 8



Observed TC Genesis, 1979-2021
7-day Period 0814 to 0820

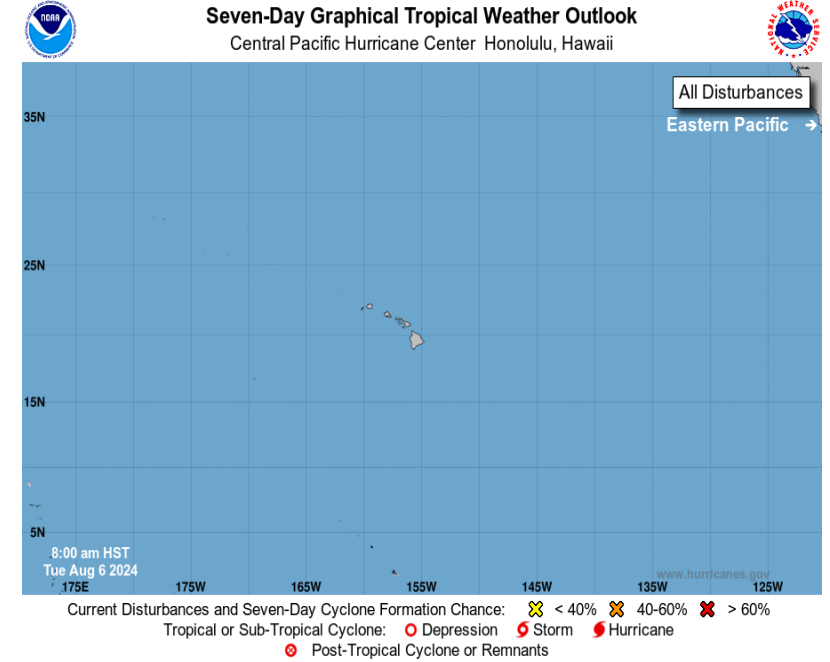
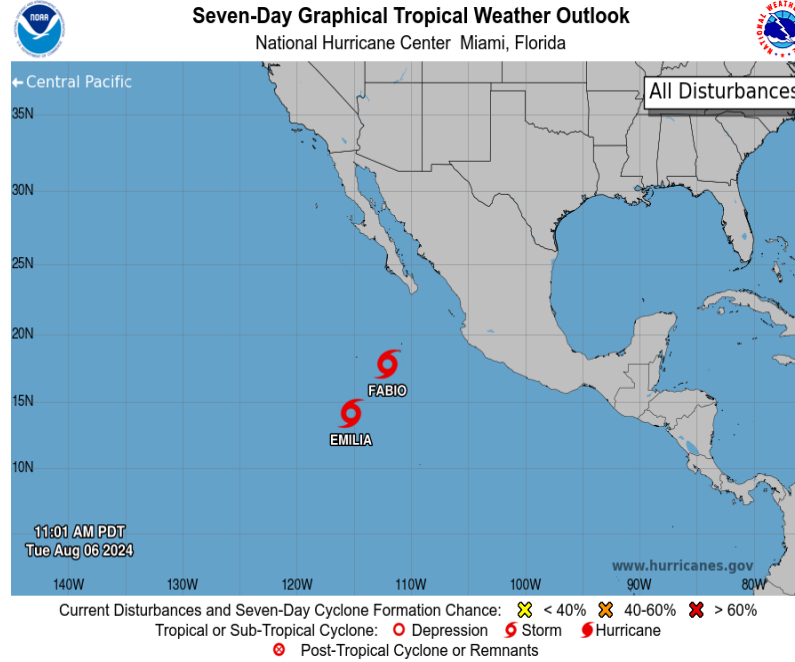
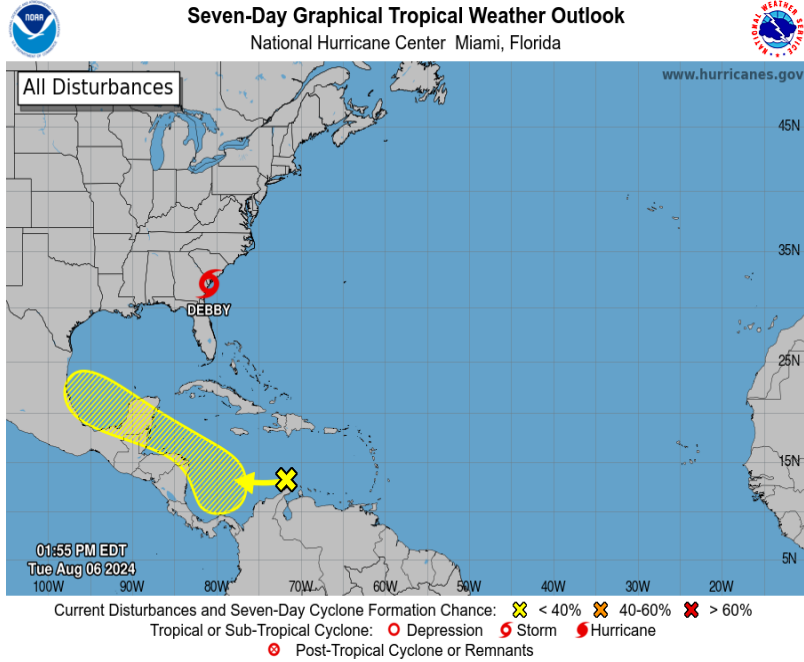


Observed TC Genesis, 1979-2021
7-day Period 0821 to 0827



Experimental

Tropical Cyclone Monitoring/Forecast: NHC / CPHC

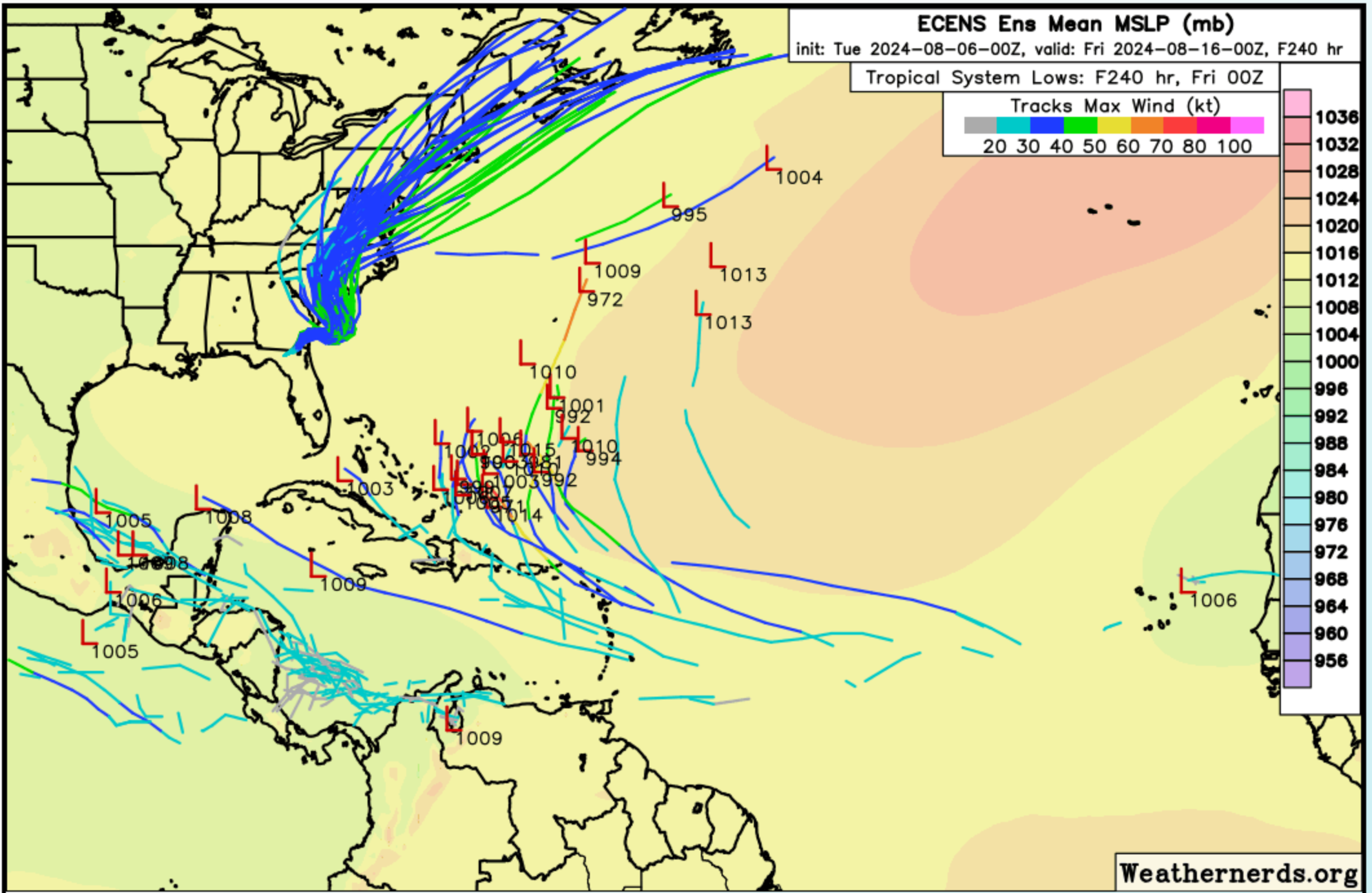
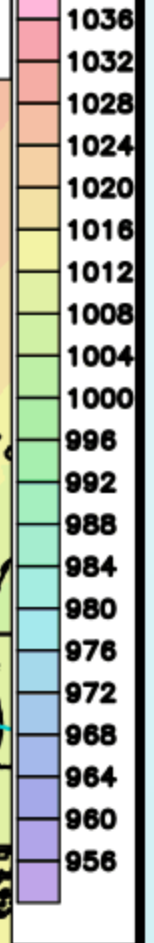


ECENS Ens Mean MSLP (mb)

init: Tue 2024-08-06-00Z, valid: Fri 2024-08-16-00Z, F240 hr

Tropical System Lows: F240 hr, Fri 00Z

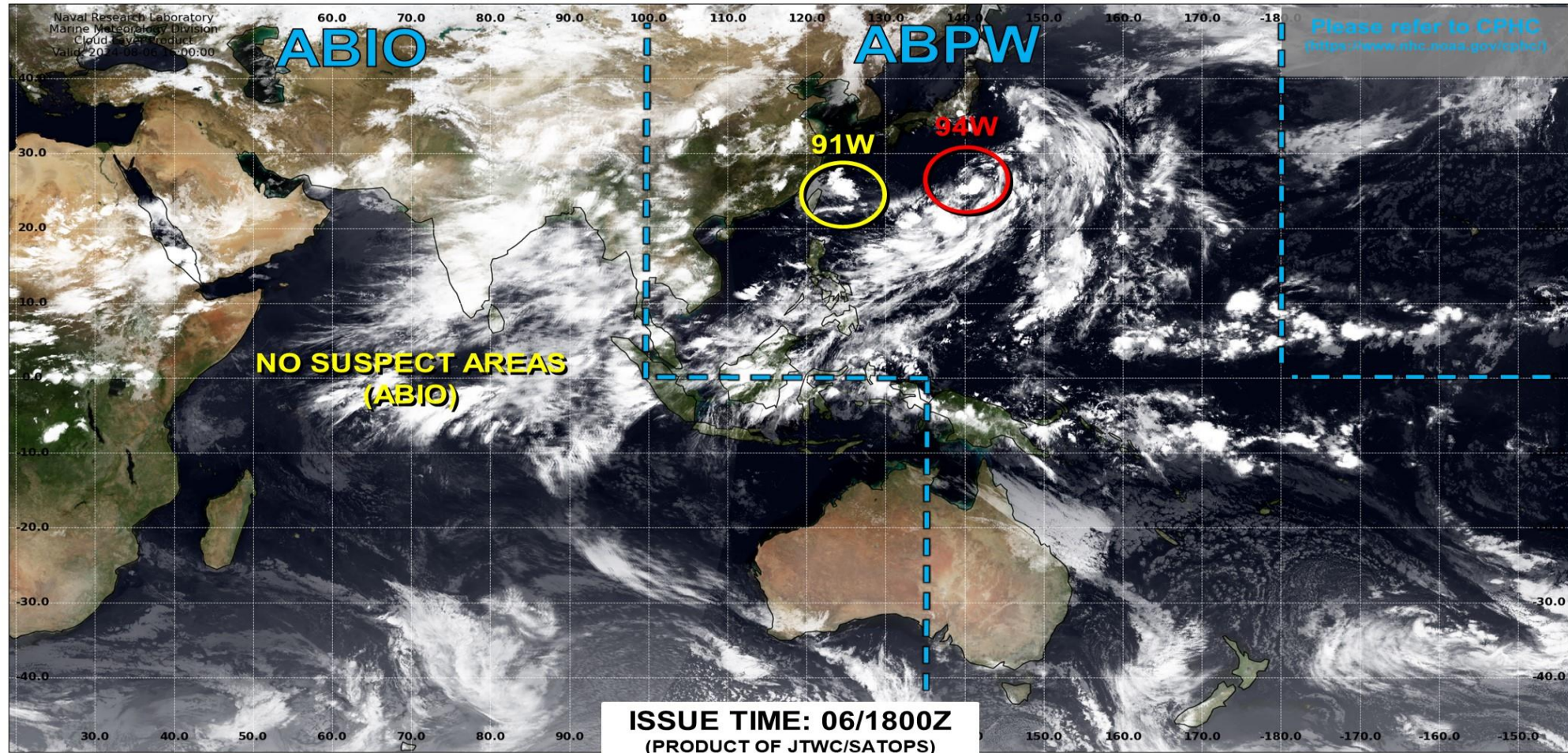
Tracks Max Wind (kt)



Tropical Cyclone Monitoring/Forecast: JTWC



JOINT TYPHOON WARNING CENTER



TC development unlikely within 24 hours



TC development likely, but expected to occur beyond 24 hours



TC development likely within 24 hours (Reference TCFA)



Monitoring for potential transition to TC. Invest label color denotes tropical transition probability

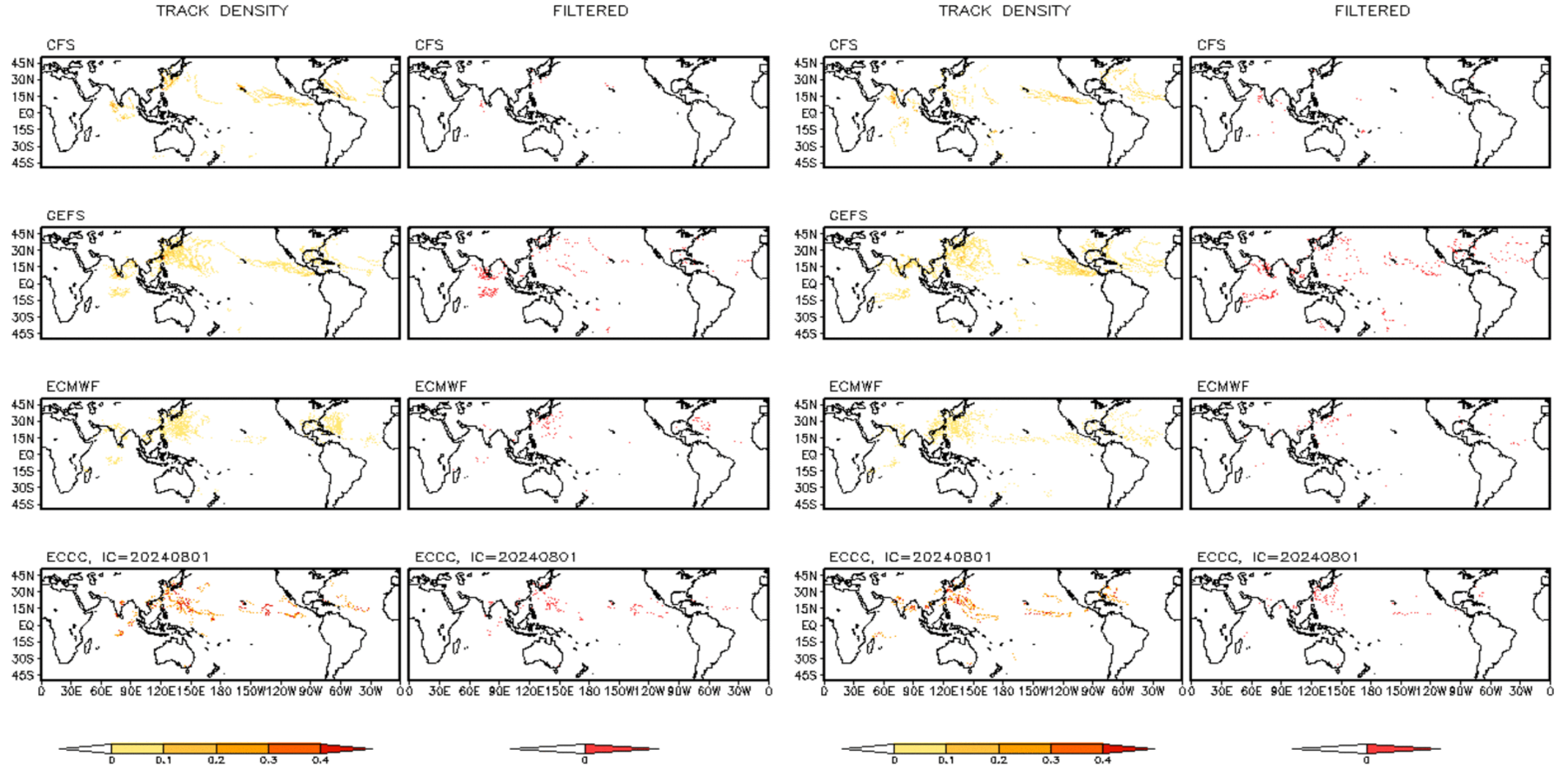


Tropical Cyclone (Reference Warning)

Multi-Model TC Track Densities: Weeks 2+3

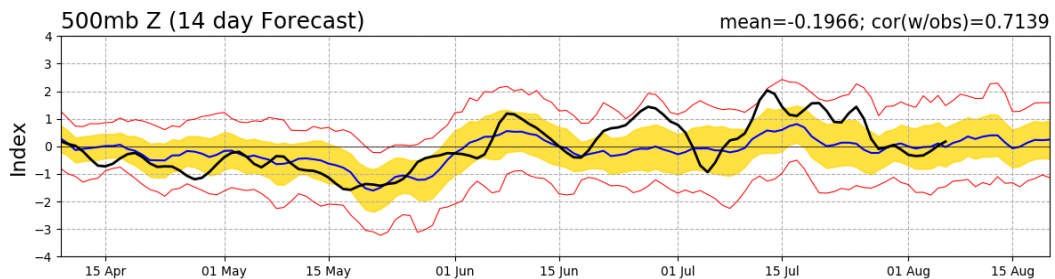
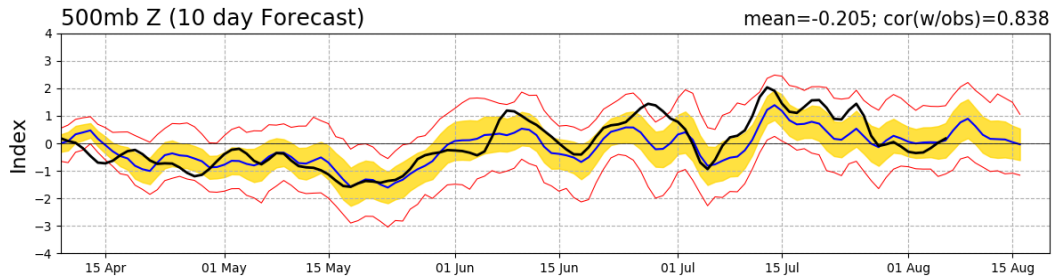
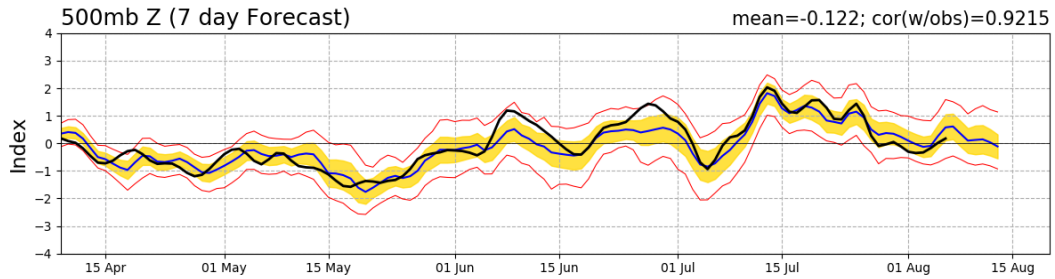
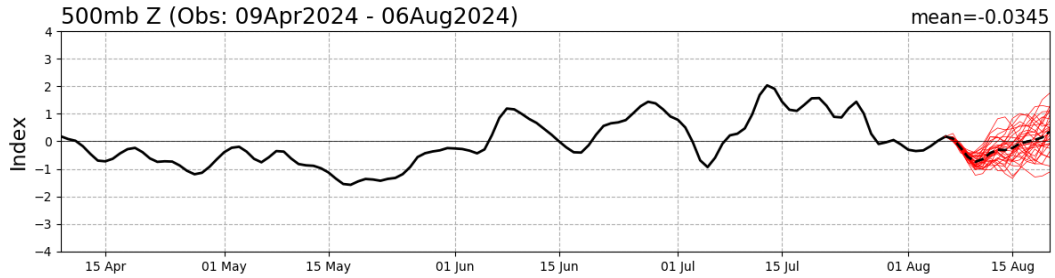
Storm Track Density Distribution, IC=20240805
Week 2 Forecast: 0814–0820

Storm Track Density Distribution, IC=20240805
Week 3 Forecast: 0821–0827

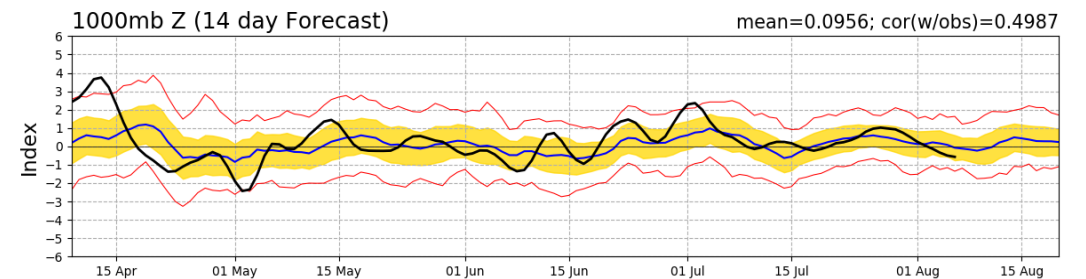
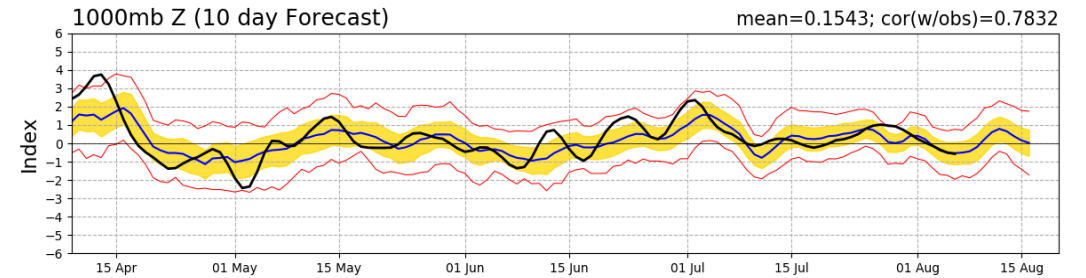
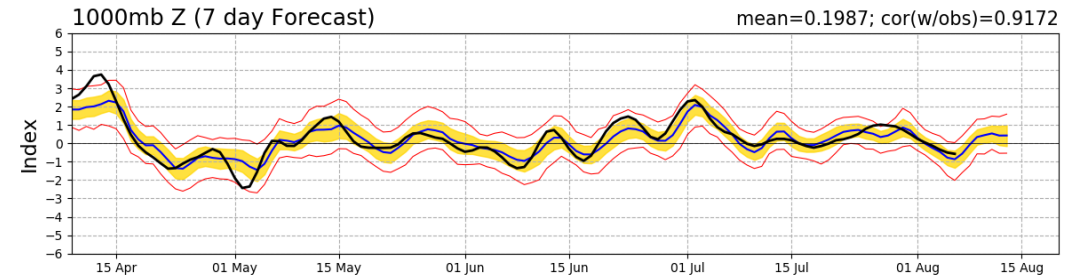
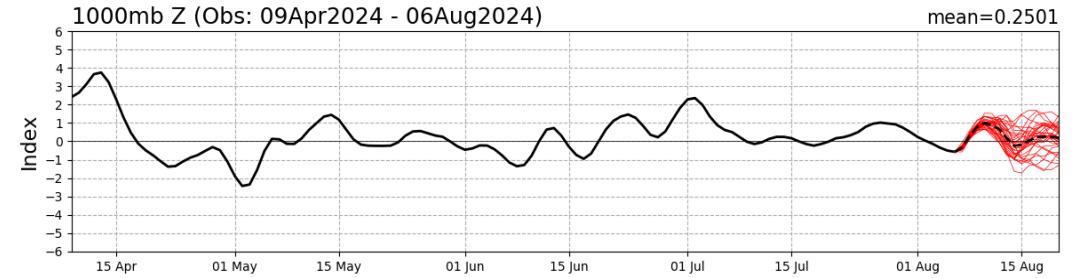


Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts

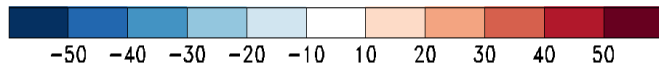
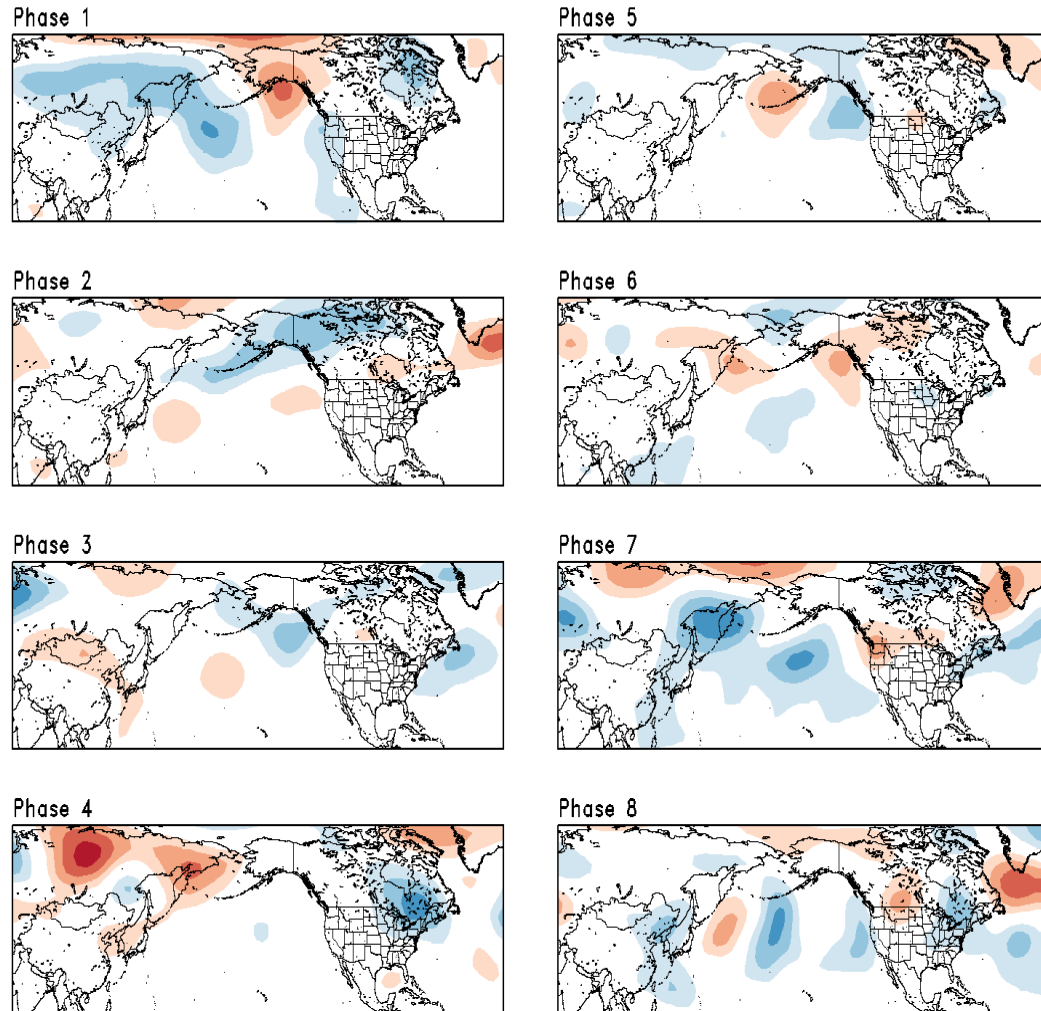


AO Index: Observed & GEFS Forecasts

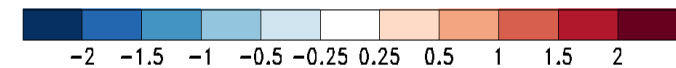
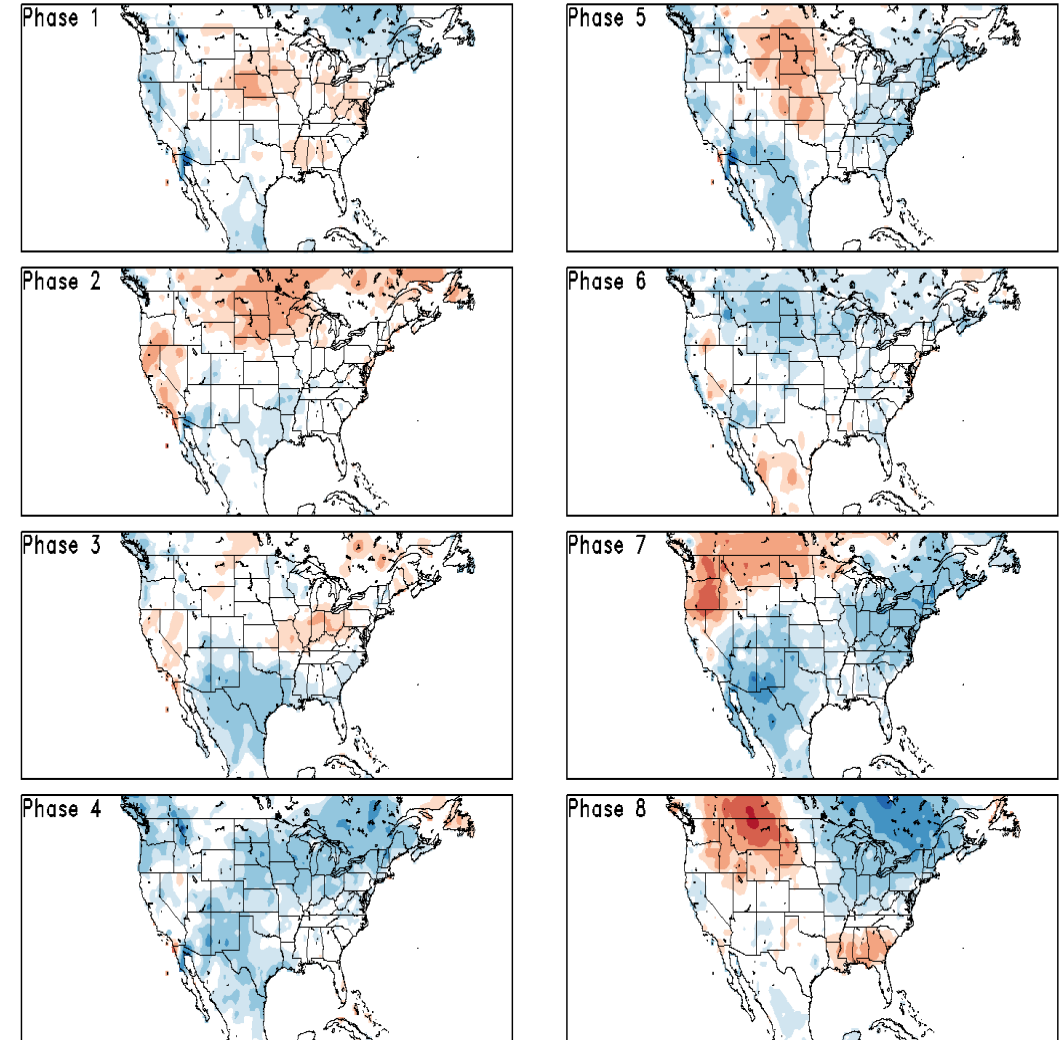


Historical 500-hPa Height & U.S. Temperatures By MJO Phase:

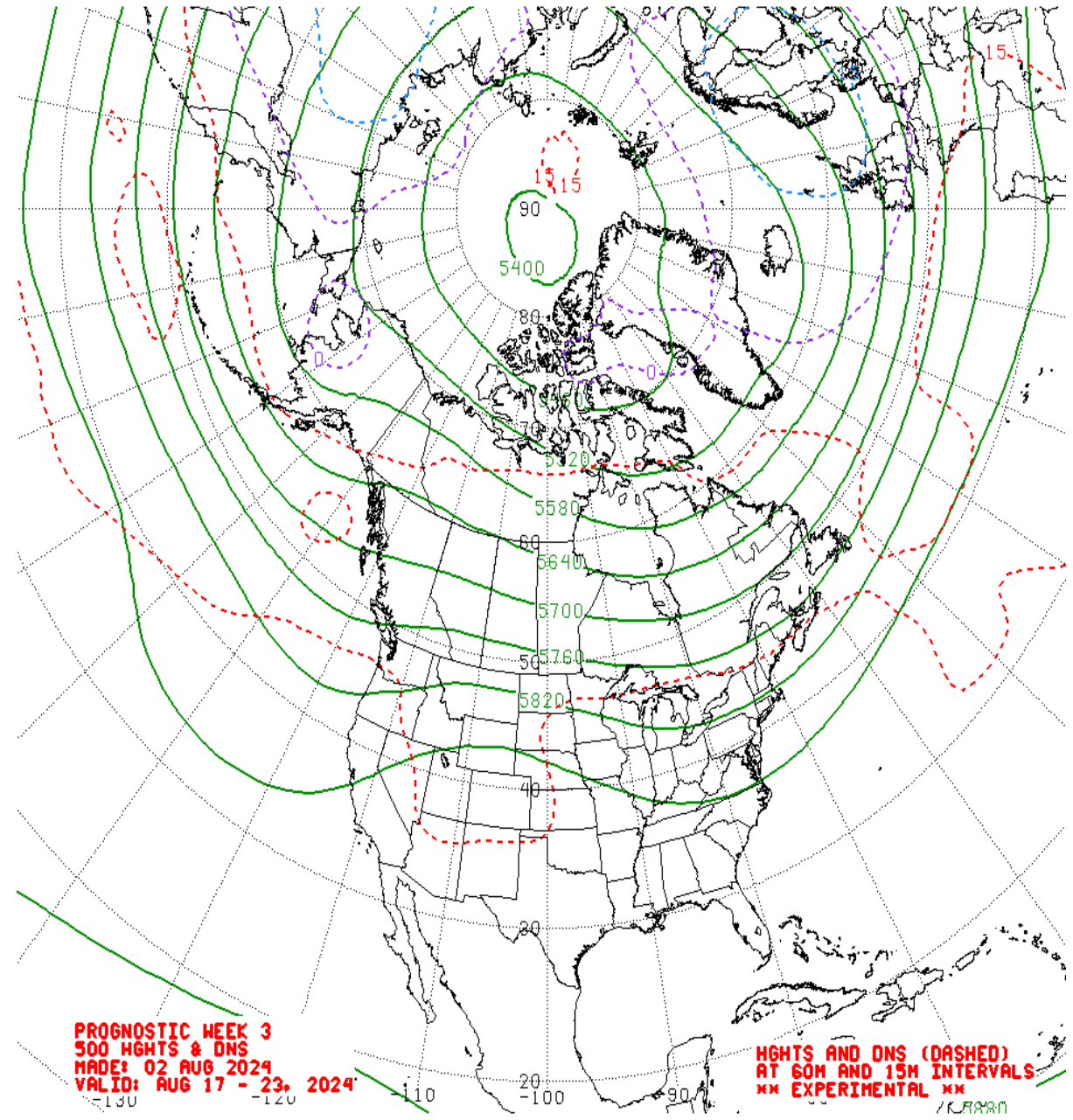
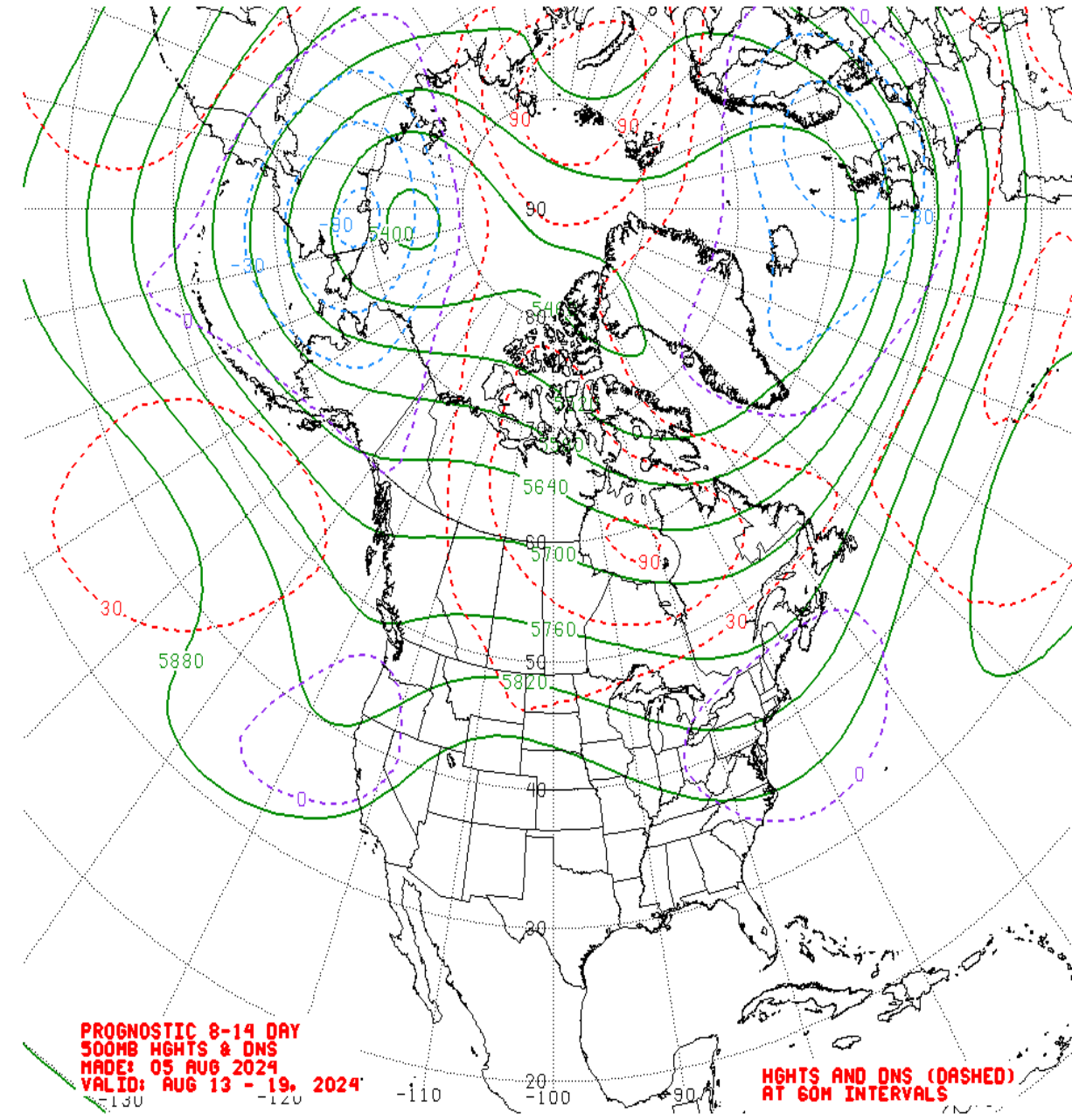
JAS MJO Composite: CDAS 500-hPa Height (m)



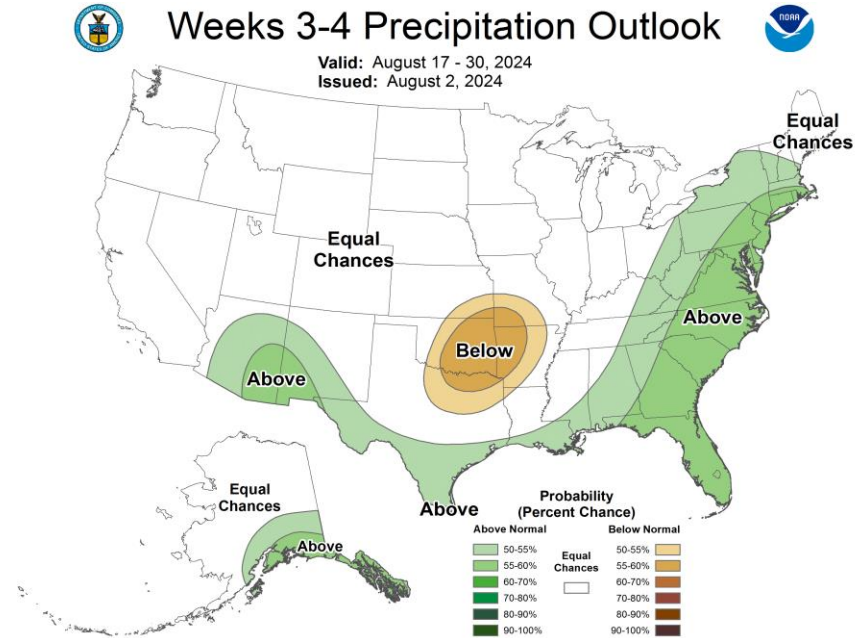
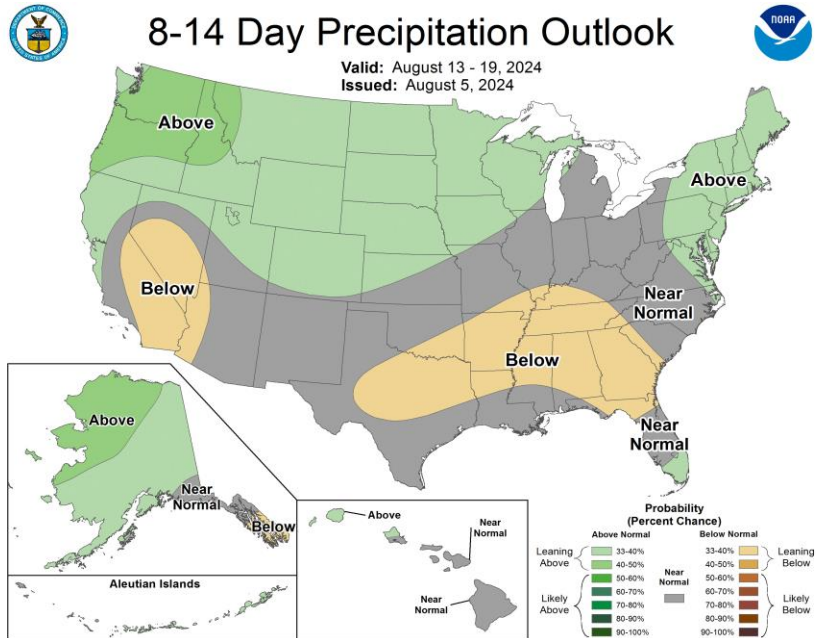
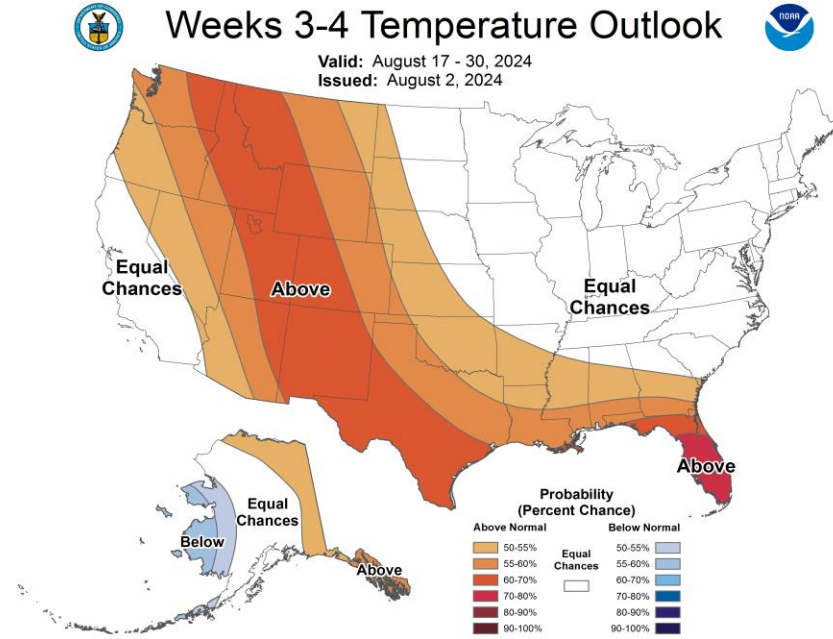
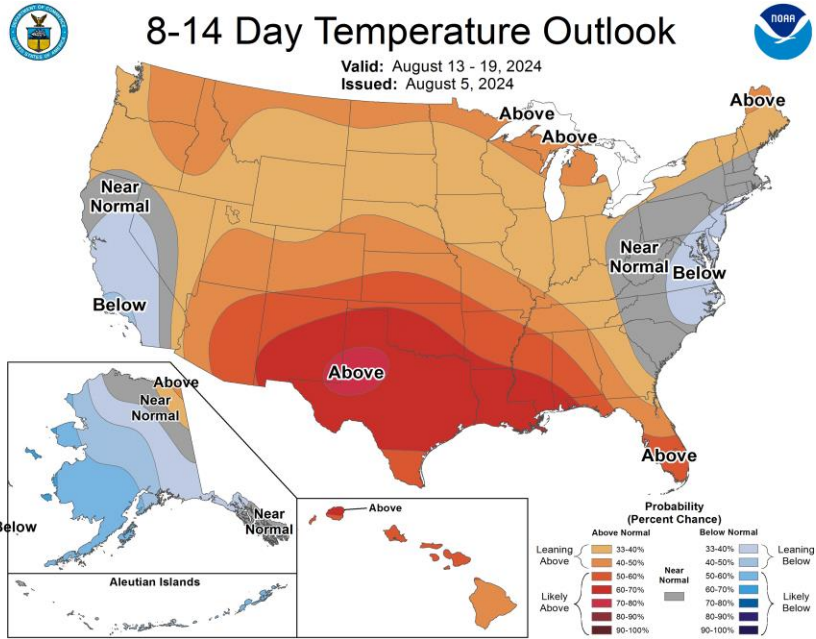
JAS MJO Composite: GLBT (degC)



Mean 500-hPa Height Anomaly Forecasts: Weeks 2+3



Official Temperature & Precipitation Forecasts:



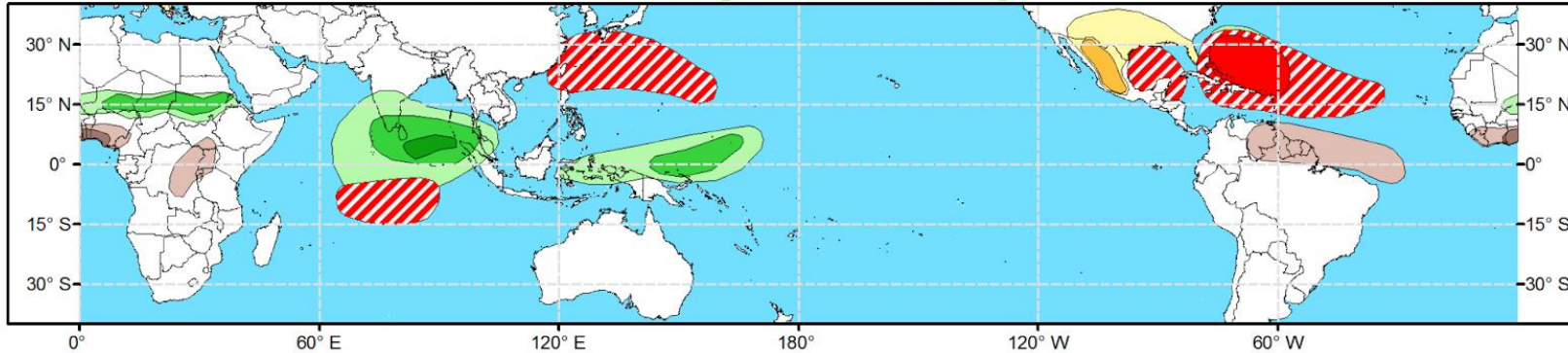


Global Tropics Hazards Outlook

Climate Prediction Center

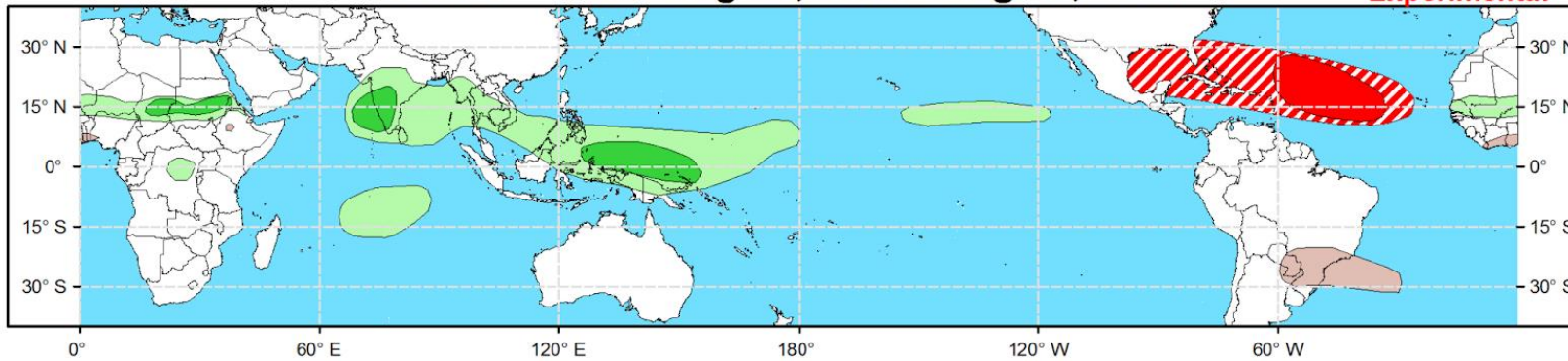


Week 2 - Valid: Aug 14, 2024 - Aug 20, 2024



Week 3 - Valid: Aug 21, 2024 - Aug 27, 2024

**** Experimental ****



**Tropical Cyclone (TC)
Formation Probability**



>20% >40% >60%

*Tropical Depression (TD)
or greater strength*

**Above-Average
Rainfall Probability**



>50% >65% >80%

*Weekly total rainfall in the
Upper third of the historical range*

**Below-Average
Rainfall Probability**



>50% >65% >80%

*Weekly total rainfall in the
Lower third of the historical range*

**Above-Average
Temperatures Probability**



>50% >65% >80%

*7-day max temperatures in the
Upper third of the historical range*

**Below-Average
Temperatures Probability**



>50% >65% >80%

*7-day min temperatures in the
Lower third of the historical range*

Issued: 08/06/2024
Forecaster: Allgood

This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.